

Institution: University of Edinburgh		
Unit of Assessment: 7		
Title of case study: Assessing the overprovision of alcohol and tobacco in Scotland: improving health outcomes and influencing policy		
Period when the underpinning research was undertaken: 2014 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Niamh Shortt	Professor of Health Geographies	2005 - present
Jamie Pearce	Professor of Health Geography	2009 - present
Period when the claimed impact occurred: June 2015 – December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words) <p>Shortt, Pearce and their team at the Centre for Research on Environment, Society and Health (CRESH) have achieved significant nation-wide impact in the area of alcohol and tobacco policy. Their research evidences the ways in which tobacco and alcohol retail availability is related to health harm. This research programme has been instrumental in shaping national-level strategies around harm reduction and steered the direction of government policy and national advocacy charity responses. Findings have also directly impacted decision-making about local retail environments to prevent harm and reduce health inequalities. The reach and significance of impact has been enabled by the team's collaborative working practices and engagement with policy makers and external organisations.</p>		
2. Underpinning research (indicative maximum 500 words) <p>Tobacco and alcohol use pose significant global public health challenges and are major determinants of preventable morbidity and mortality. Globally, 7 million lives are lost each year to tobacco related illness and a further 3.3 million to alcohol related illness. In Scotland, these concerns are particularly acute with one in every 5 deaths attributable to smoking and one in 20 to alcohol. The financial cost incurred in Scotland annually from tobacco use amounts to GBP1,100,000,000 (including costs to the NHS) and alcohol misuse is estimated to cost GBP3,600,000,000 in health, social care, crime, and other costs, equivalent to GBP900 per adult. The alcohol-related death rate in Scotland is twice that of England and smoking rates in Scotland are also the highest in the UK. As a result of these statistics, tobacco and alcohol consumption were selected as two key indicators used to monitor progress in the Scottish Government's National Performance Framework.</p> <p>CRESH is motivated by the urgent need to develop policies in Scotland that are context-specific and address broad underlying socio-economic inequalities. CRESH research developed a compelling evidence base that has unequivocally demonstrated an association between tobacco and alcohol availability, health-related behaviours, and health harm. Research underpinning this impact case study explicitly addresses the availability of alcohol and tobacco in two key areas, as follows.</p> <p>1. Tobacco and alcohol retail density and inequalities</p> <p>CRESH research has utilised rich secondary datasets to demonstrate a spatial association between tobacco and alcohol retail availability and socioeconomic deprivation. Shortt and Pearce have shown a strong social gradient in the availability of tobacco and alcohol products in Scotland, with more outlets in the most socially deprived neighbourhoods when compared to the most affluent neighbourhoods [3.1 and 3.2]. Collaborative research with <i>Alcohol Focus Scotland</i> examined alcohol outlet availability and detailed the findings in national and local reports, providing evidence for local level decision making [3.3]. These reports document the extent and spatial distribution of inequalities, and product availability at local and national levels. An online</p>		

mapping platform developed by the team to accompany the reports allows users to map, download and scrutinise the retailer and health data. This is the first global example of such data being collected and made available free of charge for the public good [3.3].

2. Tobacco and alcohol retail density and health harm

Short and Pearce's research shows that in Scotland the local availability of alcohol and tobacco is strongly associated with health-related behaviours, health harms and deaths. For smoking they have demonstrated that teenagers living in areas with the highest density of tobacco outlets are more likely to smoke or experiment with smoking [3.4], and adults in these areas are more likely to smoke (and less likely to quit) [3.5]. Using spatial simulation techniques, a policy focussed paper has demonstrated the impact that twelve potential policies would have on tobacco availability [3.6]. In a novel and policy relevant approach the paper also explores the equity impact of potential policies [3.6]. This paper was co-produced with Public Health Scotland (with Garth Reid, Interim Head of PHS Research Hub and Knowledge Services as co-author) and the results made available to PHS and the Scottish Government early in 2019 (see reference in Scottish Government supporting letter [5.8]). For alcohol, findings confirm that in Scotland hospitalisation rates and deaths from alcohol-related illness are highest in areas with the highest density of alcohol retailers [3.3]. This effect is demonstrated at both national and local scales. Furthermore, research has shown that those in the lowest income groups are disproportionately affected by alcohol outlet density, revealing the greatest harms when alcohol availability increases [3.2].

3. References to the research (indicative maximum of six references)

[3.1] Shortt, N., Tisch, C., Pearce, J., Mitchell, R., Richardson, E., Hill, S. & Collin, J. (2015). A cross-sectional analysis of the relationship between tobacco and alcohol outlet density and neighbourhood deprivation. *BMC Public Health*, 15, 1014. doi:10.1186/s12889-015-2321-1 [48 citations]

[3.2] Shortt, N., Rind, E., Pearce, J. & Mitchell, R. (2018). Alcohol risk environments, vulnerability and social inequalities in alcohol consumption. *Annals of the Association of American Geographers*, 108, 1210-1227. doi:10.1080/24694452.2018.1431105 [6 citations]

[3.3] Richardson, E.A., Shortt, N.K., Pearce, J. & Mitchell, R. (2014) Alcohol-related illness and death in Scottish neighbourhoods: is there a relationship with the number of alcohol outlets. Report published with Alcohol Focus Scotland, updated in 2018 (<https://www.alcohol-focus-scotland.org.uk/media/310762/alcohol-outlet-availability-and-harm-in-scotland.pdf>). Accompanied by a freely available webmap and 30 local authority profiles. See webmap here: <https://creshmap.com> and local authority profiles and updated report here: <https://www.alcohol-focus-scotland.org.uk/campaigns-policy/availability-and-licensing/alcohol-outlet-availability/>

[3.4] Shortt, N., Tisch, C., Pearce, J., Richardson, E. & Mitchell, R. (2016) The density of tobacco retailers in both home and school environments and relationship with adolescent smoking behaviours in Scotland. *Tobacco Control*, 25, 75-82. doi:10.1136/tobaccocontrol-2013-051473 [39 citations]

[3.5] Pearce, J., Rind, E., Shortt, N., Tisch, C. & Mitchell, R. (2016). Tobacco retail environments and social inequalities in individual-level smoking and cessation among Scottish adults. *Nicotine and Tobacco Research*, 18, 138-146. doi:10.1093/ntr/ntv089 [22 citations]

[3.6] Caryl, F., Pearce, J., Reid, G., Mitchell, R. & Shortt, N.K. (2020) Simulating the density reduction and equity impact of potential tobacco retail control policies. *Tobacco Control*, Online First, November 2020 doi:10.1136/tobaccocontrol-2020-056002

The underpinning research listed was published in highly ranked academic journals (Scopus citations as of December 2020 shown above), and supported by peer-reviewed grants. Examples include:

PI, Short, N., Co-I, Pearce, J. (2012-2013). Tobacco and alcohol environments around Scottish schools and the relationship with risky behaviours. *Medical Research Council / Chief Scientist Office* [SCPH/16] GBP66,063

PI, Pearce, J., Co-I, Shortt, N. (2011-2016). Physical Built Environments and Health Inequalities. *European Research Council* [ERC-2010-Stg 263501]. EUR1,399,570

PI, Pearce, J., Co-I, Shortt, N. (2018). To estimate the impact of a reduction in tobacco retailer availability. *Cancer Research UK* [C63100/A27483]. GBP19,375

PI Shortt, N, Co-I Pearce, J. To determine whether cigarette price differs between areas of high and low density (Project 1). (2018-2019). *Scottish Government / Public Health Scotland* GBP15,820

PI Shortt, N, Co-I Pearce, J. To assess the level of exposure to tobacco retailing in children already vulnerable to smoking behaviours (Project 2). (2018-2020). *Scottish Government / Public Health Scotland* GBP23,487

Awards. Shortt was awarded the 2020 Presidents Medal of the Royal Scottish Geographical Society for her contribution to wider society.

4. Details of the impact (indicative maximum 750 words)

Route to Impact

Shortt and Pearce's impact-related activities were developed and co-designed with, variously, colleagues in NHS Scotland, Scottish Government, and advocacy organisations (ASH-Scotland/Alcohol Focus Scotland) with a view to developing approaches to addressing the over provision of alcohol and tobacco products in Scotland. Through this work, they have had impact in two key areas: influencing key national approaches to addressing alcohol and tobacco harm and influencing the alcohol licensing process and decision-making outcomes.

Influencing national strategies to addressing alcohol and tobacco harm

The research has contributed directly to government-level strategic approaches to addressing the harms of alcohol and tobacco in Scotland. This has been achieved through targeted efforts to raise awareness and understanding of the links between outlet density and mortality and morbidity (drawing on research findings detailed in references **3.1**, **3.2**, **3.3**, **3.4**, and **3.5**), including: invitation to provide evidence to the Local Government and Regeneration Parliamentary Committee when discussing the Air Weapons and Licensing (Scotland) Bill (Shortt); presenting research findings to key policymakers in Scottish Government, including invited presentations (Pearce) to the *Tobacco Control: Research and Evaluation Sub-Group* (*Scottish Ministerial Working Group on Tobacco Control*); invited members (Pearce & Shortt) of the NHS Scotland Advisory Group, *Tobacco Pricing and Availability* (in 2018); and engaging directly with MSPs through invitations to speak at meetings of various *Cross-Party Groups* at the Scottish Parliament (Pearce & Shortt) [**5.1**].

Impact arising from these activities, building on the research detailed in sections 2 and 3, includes:

1. The evidence presented to the Licensing (Scotland) bill (explicitly drawing on References **3.1** and **3.3**) was used by the MSP Labour Mid Scotland and Fife to draft an amendment that would compel the Scottish Government to develop a national register of licensed premises. In the minutes from the discussion in the final debate the MSP quotes Shortt's evidence to the committee and the team's research. As a consequence the Government promised to consult widely on the issues identified in the debate [**5.2**]. In a supporting letter the MSP states that '*In my thirteen years in the Scottish Parliament I regarded the alcohol and tobacco mapping project led by Niamh Shortt and colleagues... as one of the most important pieces of hard evidence in helping deliver the Scottish Parliament's strategic objectives for alcohol and tobacco*' [**5.3**].
2. The work has received two parliamentary commendations in motions lodged by MSPs and signed by a total of 36 MSPs [**5.4**]. In one Parliamentary Motion it was recognised that the Scottish Parliament "*understands that the map* (Reference **3.3**) *will be a valuable tool for*

local authorities when granting licences and deciding whether there is an overprovision of alcohol and tobacco outlets; considers that the map also provides the opportunity to empower communities by offering them better evidence of the local picture” [5.4b]. The research has also been cited in at least two Parliamentary sessions, evidencing the impact that the research has had on MSPs and government debate. In one debate, a labour MSP cited the research (References 3.1 and 3.3) stating *“Recent research by Niamh Shortt of the University of Edinburgh found not only that those from our most deprived communities are more likely to die due to alcohol, but that they have access to considerably more places to buy alcohol than those in our most affluent areas.... The research was clear: we require radical policies that address inequalities, the social, political and economic drivers of poverty, and alcohol availability. Changes to alcohol licensing, labelling and advertising need to be part of any future strategies on alcohol”* demonstrating a shift in the political commitment to addressing the harms of alcohol ubiquitous availability [5.5].

3. The CRESH research findings have been embedded in strategic policy development of the national public health organisation, and the key national-level advocacy organisations in the areas of alcohol and tobacco. Public Health Scotland and the Scottish Government note that the influence of the research is evidenced through: a focus on tobacco availability in the publication of the Scottish Government’s *Raising Scotland’s Tobacco Free Generation* (2018) (including references to References 3.1 and 3.5 in the Rapid Evidence Review used to support the publication); in setting the strategic priorities of Scotland’s newly formed national public health body (Public Health Scotland); and influencing the content of key elements of the Scottish Government’s strategy documents on addressing the harm of alcohol and tobacco (in particular, addressing availability was identified as a key policy priorities, and this new direction was heavily influenced by the team’s research (particularly References 3.1, 3.4, 3.5 and 3.6) [5.7,5.8]. Public Health Scotland have also noted that *“the work has been instrumental in shaping the priorities of Public Health Scotland”* and *“used as an example of good working practice (impact) by Public Health Scotland”* [5.7]. A supporting letter from the Head of Alcohol, Tobacco and Drugs at the Scottish Government, highlights that *“The existence of CRESH and this particular work has allowed government to prioritise this aspect of tobacco control for forthcoming legislation. This would simply not have been possible without CRESH. It’s important to note that this work has also inspired further research and action being commissioned by Public Health Scotland and CRUK – having seen the added value and potential impact the CRESH work has had and is continuing to have”*. [5.8]. This letter references key publications listed above, including 3.6 but is referring to this broad collection of work. The work was also highlighted as an *“example of good working practice (impact) by Public Health Scotland”* [5.8]. The webmap developed by Shortt and Pearce [3.3] has been influential in shaping policy discussions and the strategic direction of ASH Scotland, Scotland’s national charity addressing tobacco harm. The CEO, states that *“The webmap you created has sparked and supported a number of policy discussions... and is a key resource in the larger jigsaw of work addressing tobacco use and related inequalities in Scotland”* [5.6].

Influencing the alcohol licensing process and decision outcomes

The team’s work has been instrumental in affecting decision-making relating to alcohol licensing in Scotland.

1. The CEO of Alcohol Focus Scotland has stated that Pearce and Shortt’s research *“has been a crucial component of our work on encouraging controls on where, when and how alcohol is sold”* [5.9]. AFS have used the research extensively, as detailed in the letter of support stating that *“the research has had significant influence on local licensing stakeholders”* [5.9]. (References 3.1, 3.2 and 3.3). This influence is evidenced below.
2. As a regulatory standard, each Licensing Board in Scotland (32 in total) is required to produce overprovision statements every four years. Of those statements published in 2019 at least 13 have specifically cited and used the data developed by Shortt and Pearce, leading to at least 4 Licensing Boards (North Ayrshire, South Lanarkshire, Stirling and West Dumbartonshire) formally declaring their council to be overprovided [5.9]. When an area is declared overprovided for in terms of alcohol then any further alcohol license applications in

the area should normally be refused. Each of these council areas have explicitly related their overprovision decision to the research and data developed by Shortt and Pearce, including [3.1, 3.2 and 3.3]. This means that our work is helping to reshape local environments and lifeworlds with the potential to improve health.

3. Shortt and Pearce's team have gathered evidence of local stakeholders using the CRESH research to inform licensing boards considering applications for new alcohol licences [5.9]. In at least one licensing board we have direct evidence of an alcohol licence refused based on the research. The Alcohol and Drug Partnership East Ayrshire noted that the objection was based on the CRESH research evidence stating *"Wouldn't have done it without the CRESH data and the alcohol risk environments study"* [5.10], referring to [3.2].
4. The research has also been critical in shaping various local alcohol strategies, including the Edinburgh Alcohol Strategy (2017-19) Borders Alcohol and Drugs Partnership Annual Report 2017-18 and The Alcohol Policy Review 2018 Impact on Moray Report [5.9]. According to the CEO of Alcoholic Focus Scotland *"CRESH's work has been influential in AFS's strategic thinking"* [5.9].

5. Sources to corroborate the impact (indicative maximum of 10 references)

[5.1] a) Official Report of Local Government and Regeneration Committee, 19th November 2014 (pages 5, 16, 17, 18, 19); b) Cross party group Social Sciences Agenda, June 2019; c) Cross Party group Health inequalities, May 2018. Minutes; d) Cross Party Group on Tobacco and Health June 2015: Summary from ASH

[5.2] Minutes from Debate 3 of the Air Weapons and Licensing Scotland Bill, Scottish Parliament June 25th 2015

<https://www.parliament.scot/parliamentarybusiness/report.aspx?r=10038&i=92153>

[5.3] *Former MSP Labour Mid Scotland and Fife (2007-2016)* (testimonial letter, 28/11/2016)

[5.4] a) Parliamentary Motion 1 <https://www.parliament.scot/BusinessBulletins/bb-15-111w.pdf> (page 32) and b) Parliamentary Motion 2 <https://www.parliament.scot/parliamentarybusiness/28877.aspx?SearchType=Advance&ReferenceNumbers=S5M-12647&ResultsPerPage=10>

[5.5] Meeting of the Scottish Parliament, December 20th 2017

<https://www.parliament.scot/parliamentarybusiness/report.aspx?r=11278&mode=html> (page 8)

[5.6] CEO, *ASH Scotland*, (testimonial letter 20/11/2020)

[5.7] Interim Head of PHS Research Hub and Knowledge Services, *Public Health Scotland*, (testimonial letter 06/11/2020)

[5.8] Head of Alcohol, Tobacco and Drugs, *Scottish Government* (testimonial letter 16/12/2020)

[5.9] CEO, *Alcohol Focus Scotland*, (testimonial letter 18/11/2020)

[5.10] *East Ayrshire Council* (email detailing licence refusal and connection with CRESH data and Annals Paper [3.2].)